

STRATEGY

STEPS TOWARDS SUSTAINABLE DEVELOPMENT

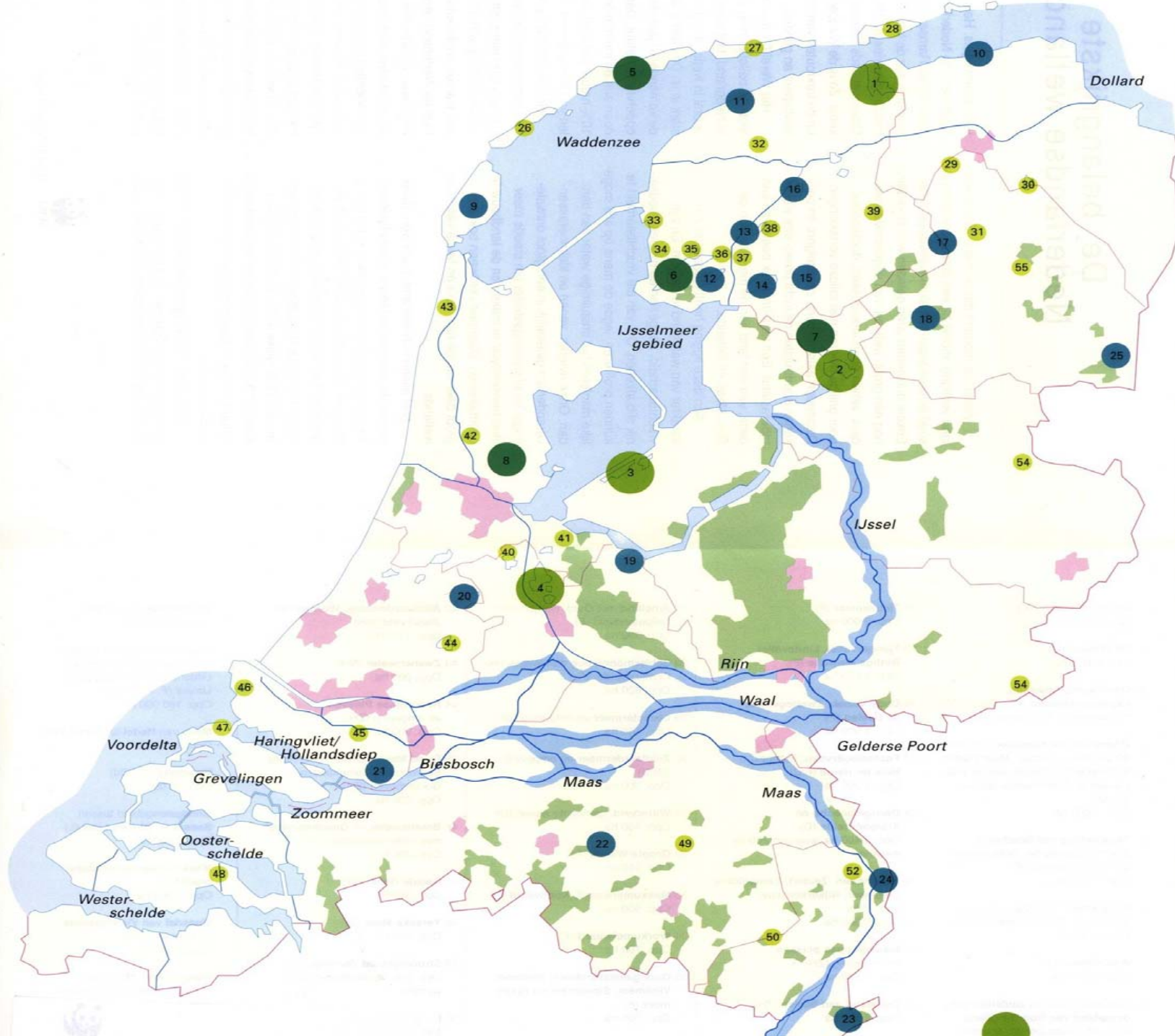


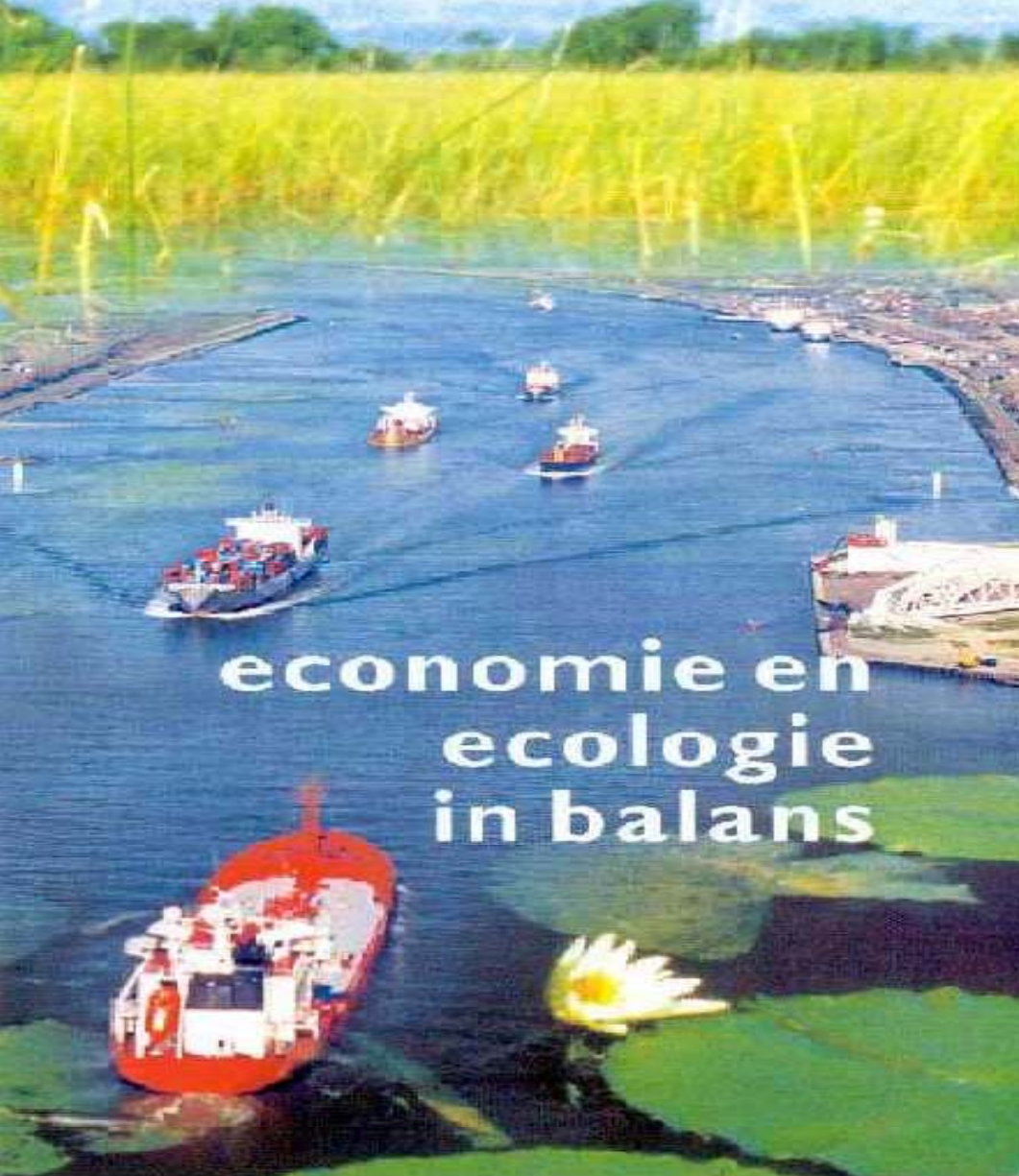
PORTLAND WETLANDS RESTORATION WORKSHOP

29 October 2003

MARIAN GEENSE







Strategy

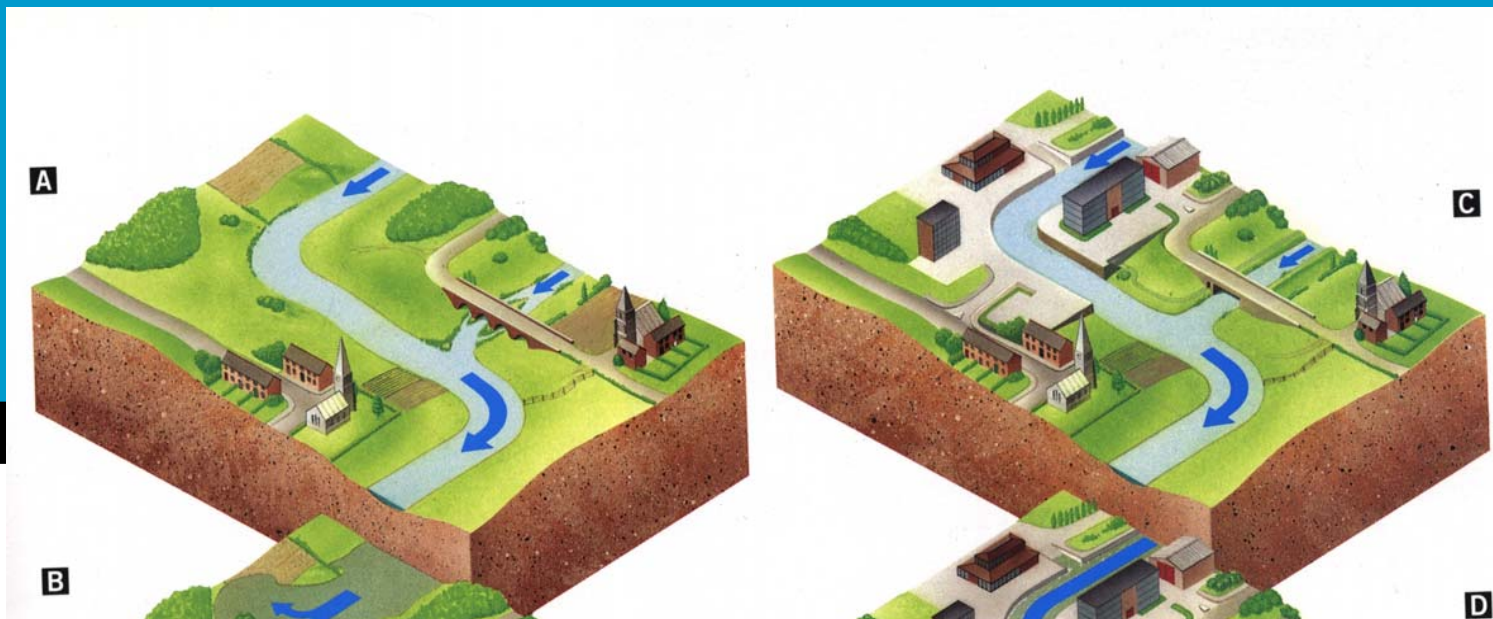
- Principles
- Strategy
- Steps
- Conclusions

WHY A STRATEGIC PLAN?

- Efficient approach
- Sustainable development
- Prevent congestion
- Prioritised environmental goals
- Communication
- Basis for resources
- Evaluation of success

Guiding principle

- Sustainable development



SUSTAINABLE DEVELOPMENT

“Development

Which meets the needs of the present

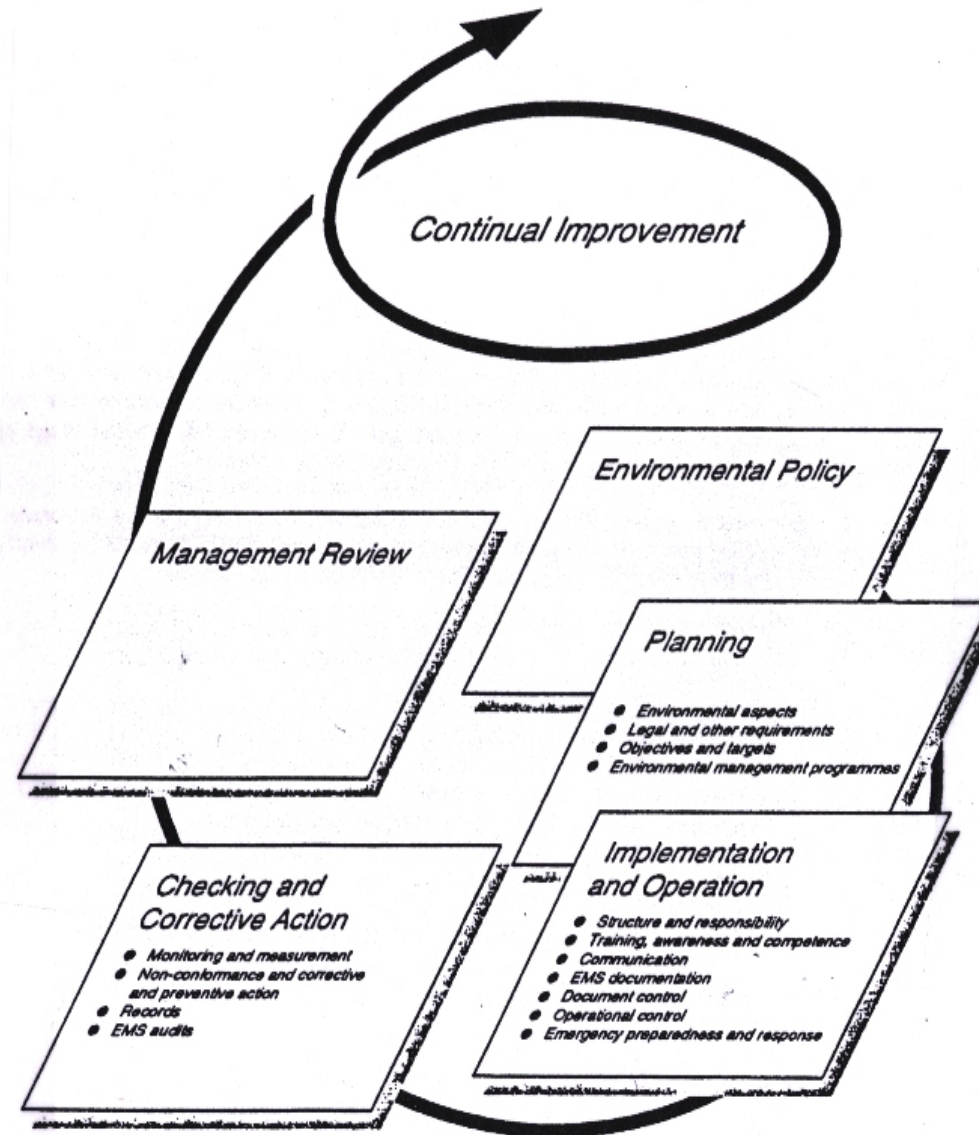
*Without compromising
the ability of future generations
to meet their own needs”*

A**B****C****D**

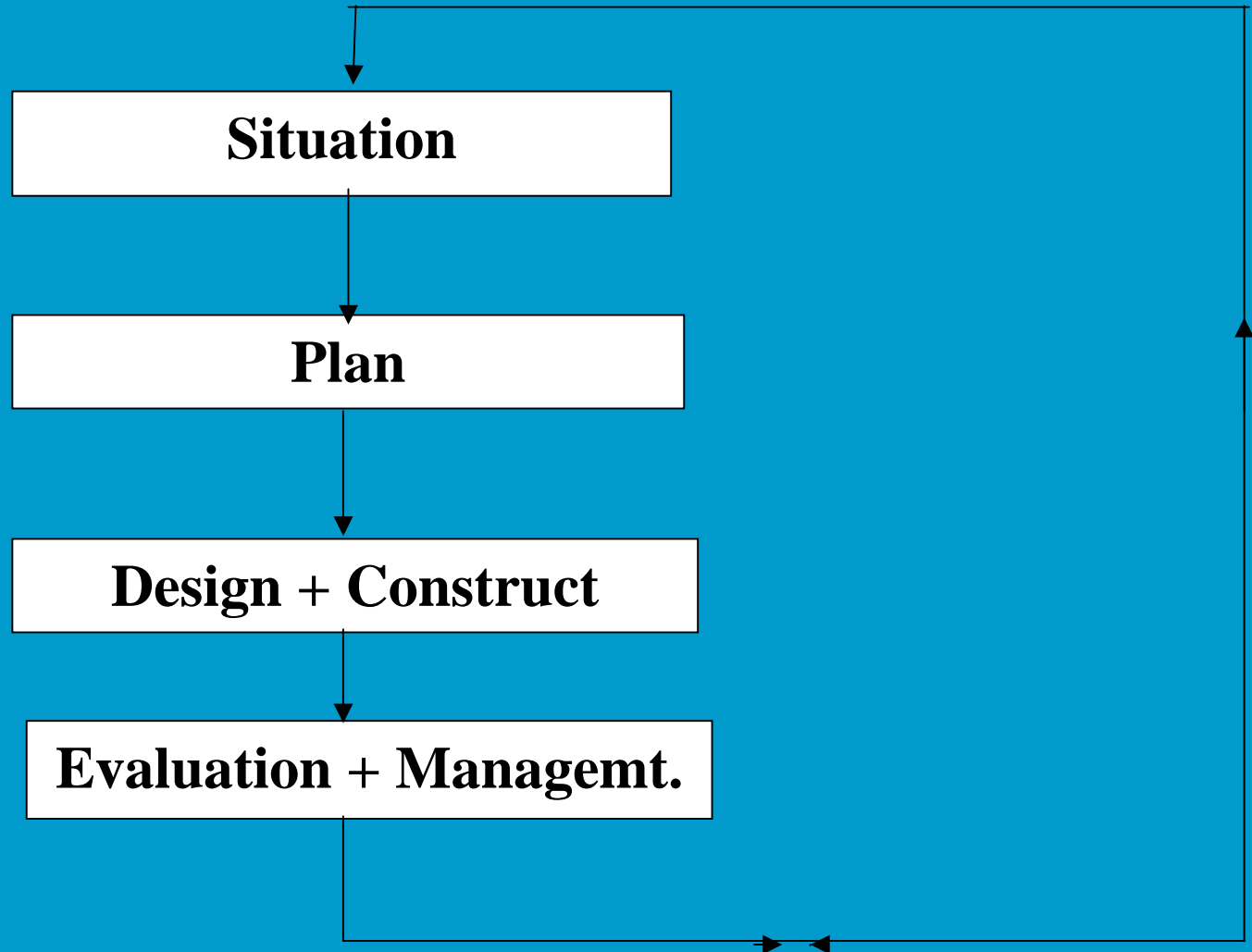


STRATEGY

- Characterization
- Planning
- Implementation
- Checking + corrections
- Management review
- Continual improvement



Environmental Management System Model







Lake Aral

HYDROLOGICAL SITUATION	1950
Surface	67.000 km ²
Inflow	50 km ³
Waterlevel	16 m +
Saltcontent	10 g/l
Irrigated area	290 000 km ²

Lake Aral

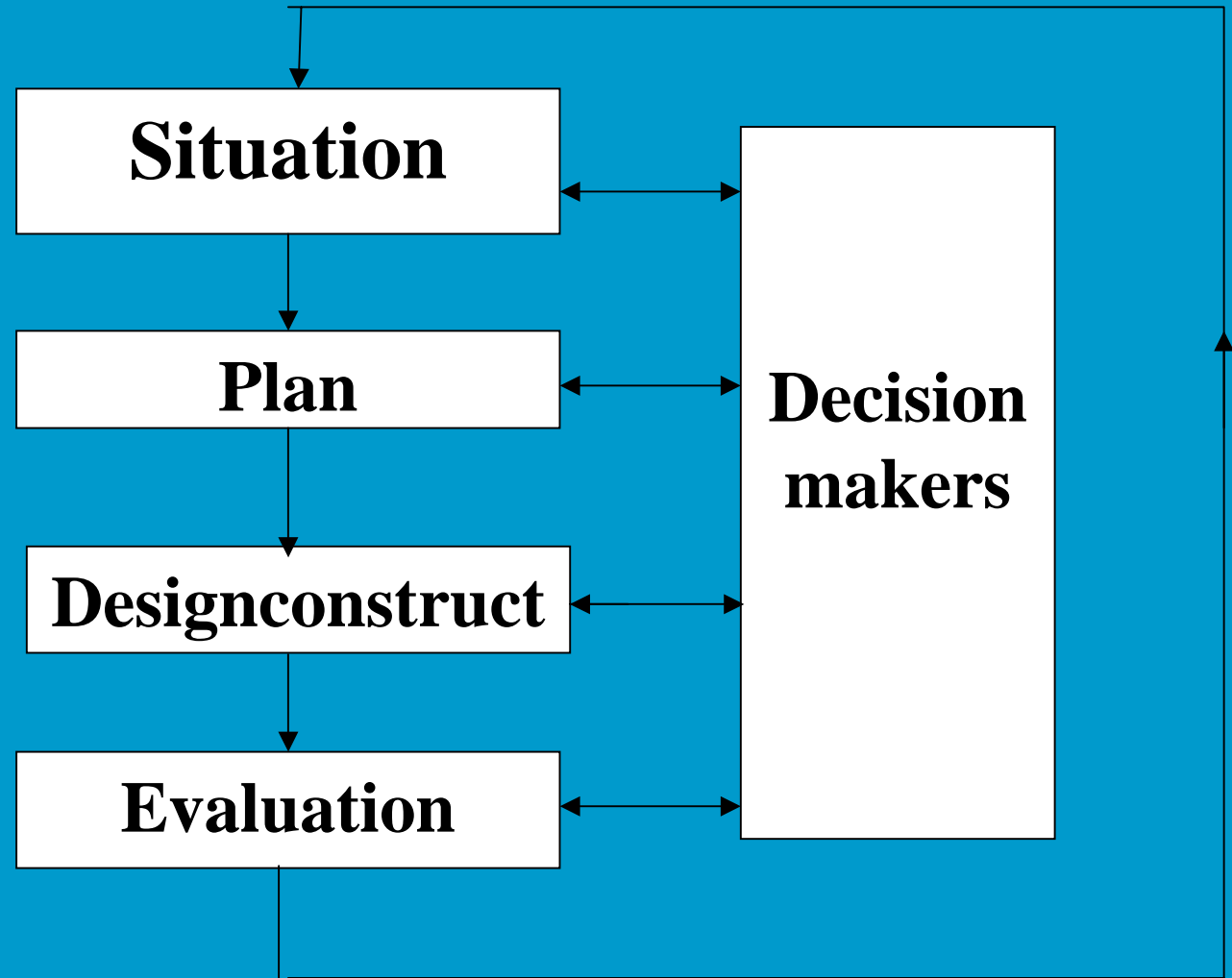
HYDROLOGICAL SITUATION	1950	2000
Surface	67.000 km ²	33.000 km ²
Inflow	50 km ³	5 km ³
Waterlevel	16 m +	0 m
Saltcontent	10 g/l	28 g/l
Irrigated area	290 000 km ²	720 000 km ²



Guiding principles

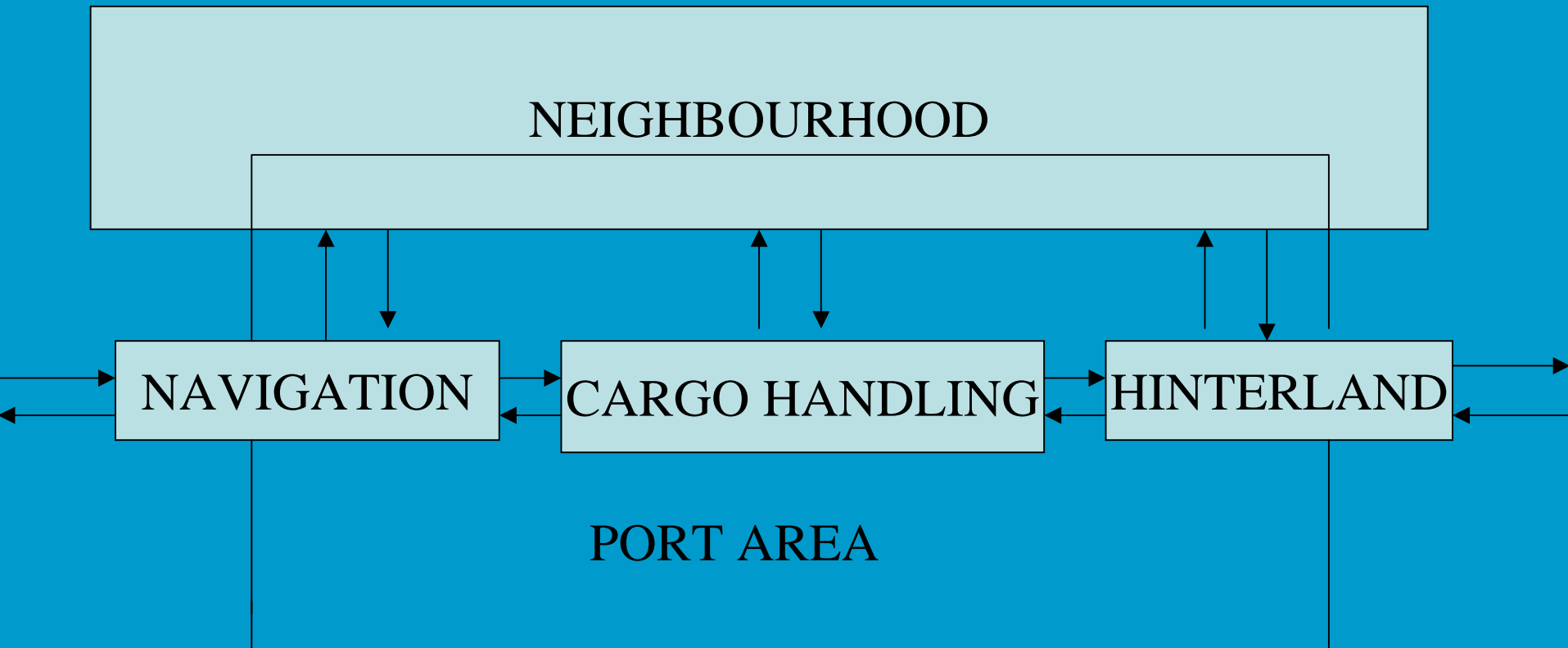


- Sustainable development
- Balance between ecology and economy





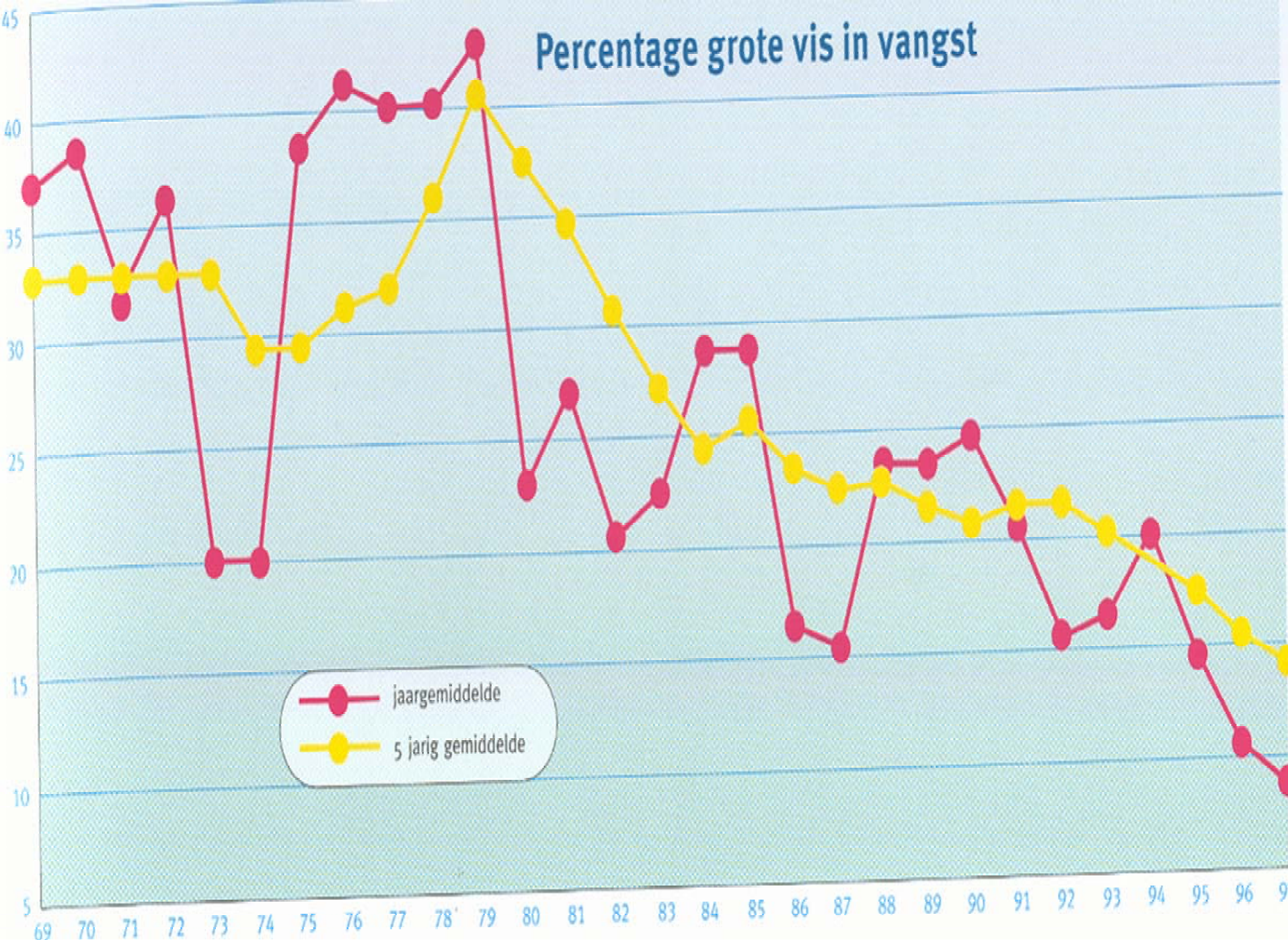
PORT



CONSEQUENCES OF PORT DEVELOPMENT

- Loss of existing nature area
- Disturbance of ecological functions
- Local disturbance during construction
- Ecological impact of mining

Percentage grote vis in vangst

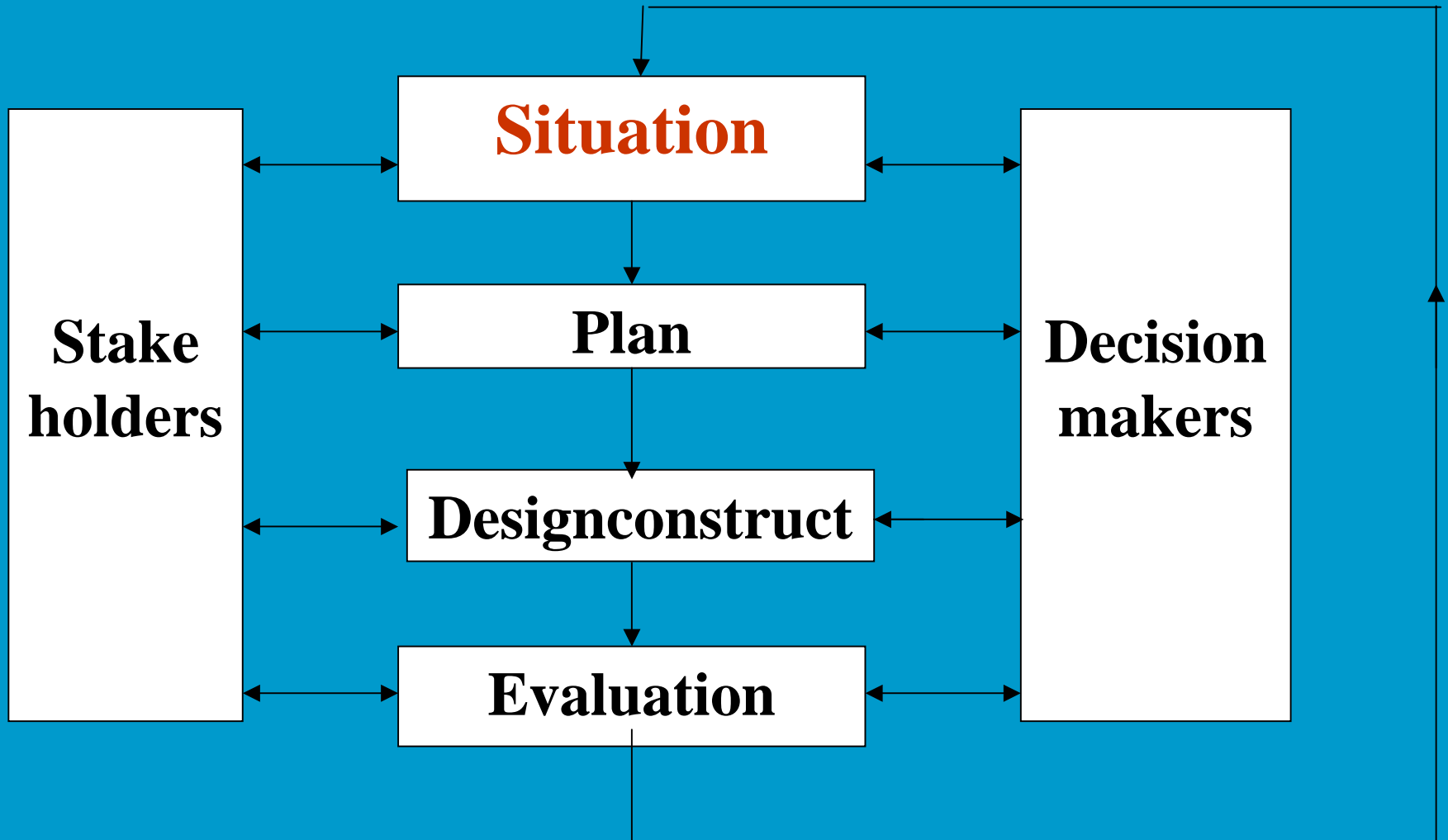




Guiding principles

- Sustainable development
- Balance between ecology and economy
- Participation from the very beginning





First step: SITUATION

- Developments in navigation and trade



SITUATION

- Navigation and trade
- Physical and chemical conditions
- Process dynamics
- Ecological values
- Socio-economic functions



Guiding principles

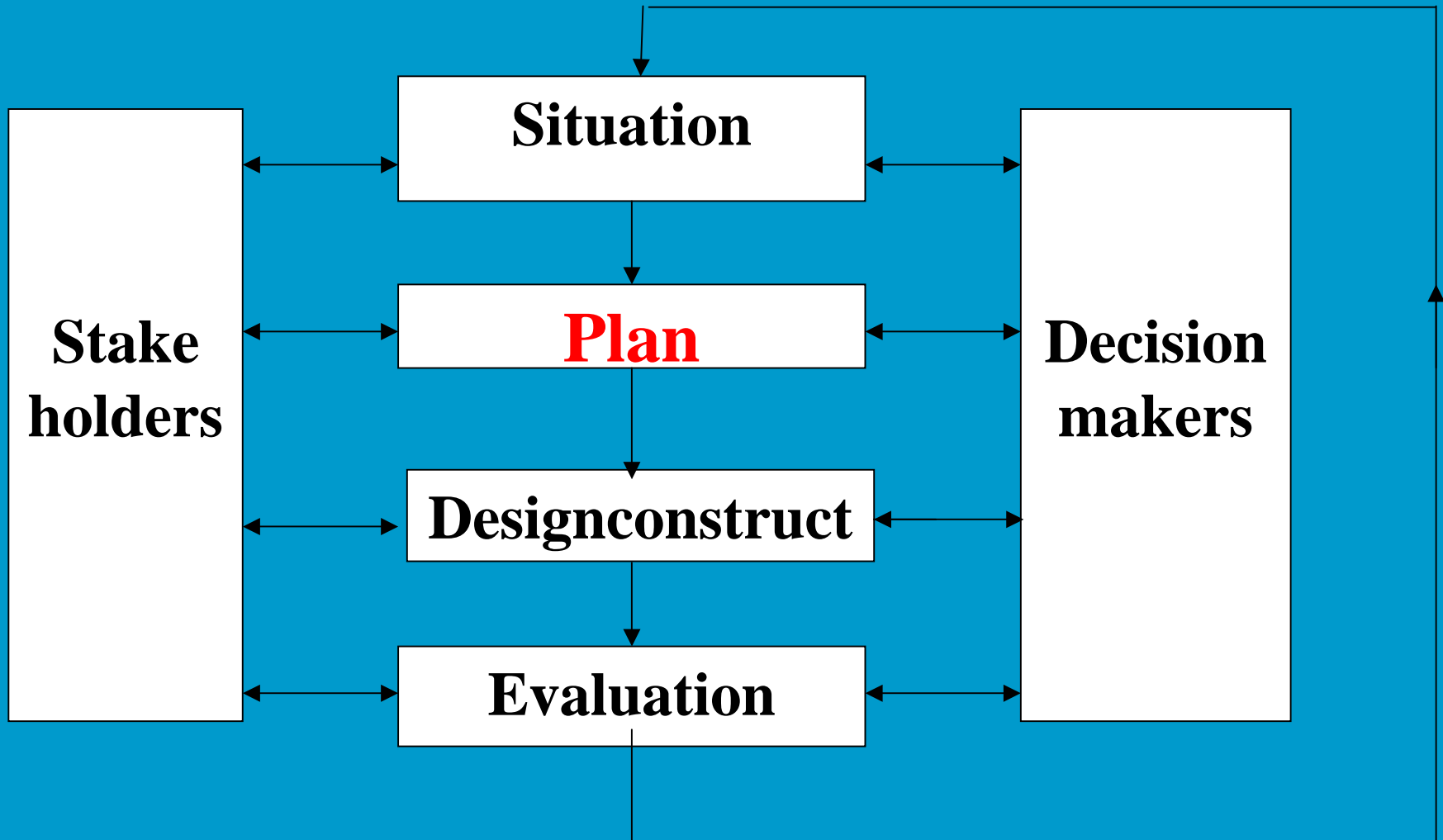
- Sustainable development
- Balance between ecology and economy
- Participation from the very beginning
- Prevention is better than cure



SITUATION: DELIVERABLES

- Report on the current state
- Definition of the problems
- Overview of bottlenecks





Second step: PLAN

SETTING GOALS AND OBJECTIVES



OBJECTIVES

Disturbance in the current state



Better management





OBJECTIVES

Disturbance in the future



Protective measures and permanent
management





OBJECTIVES

No possibility to protect



Prove social necessity and minimise impact



Guiding principles

- Sustainable development
- Balance between ecology and economy
- Participation from the very beginning
- Prevention is better than cure
- Ecological values benefit socio-economic values



The port of Rotterdam

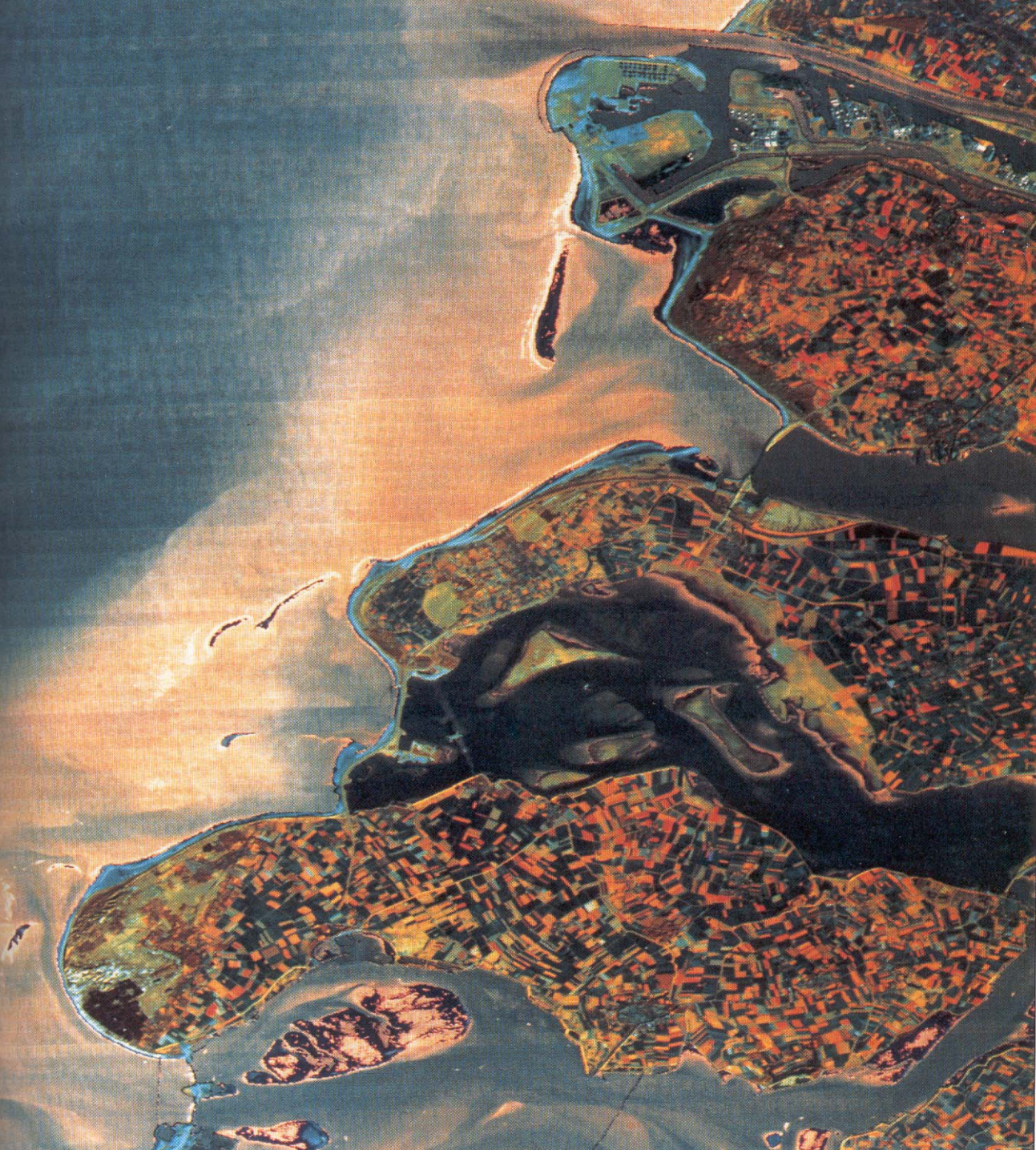
An aerial map of the port of Rotterdam, showing the Scheldt river and the city's urban layout. The map is color-coded to highlight various areas: blue for water, green for nature areas, and brown/orange for urban areas. The port area is clearly visible on the left side of the map.

Nuisance prevention

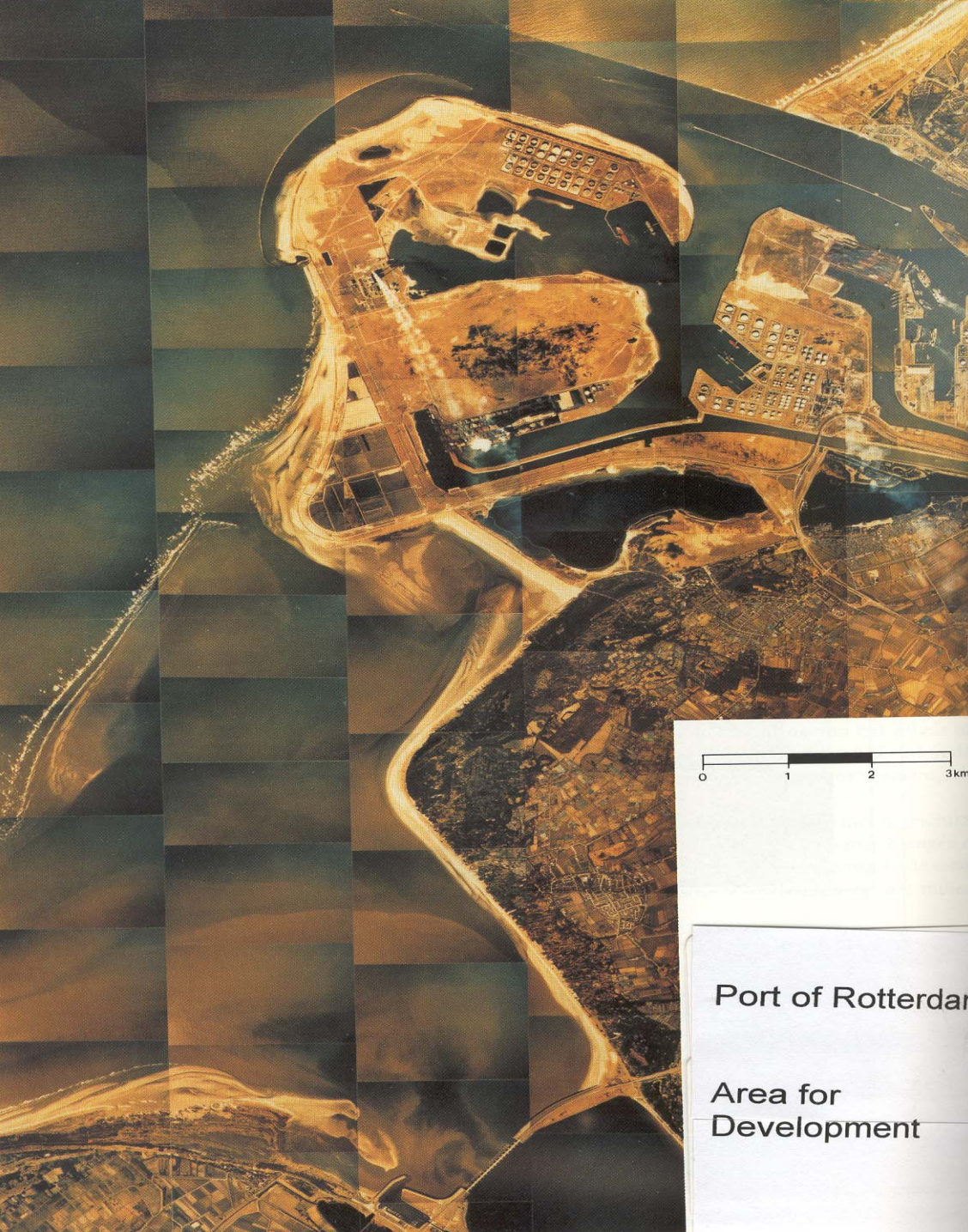
Landscaping

Education

Nature areas

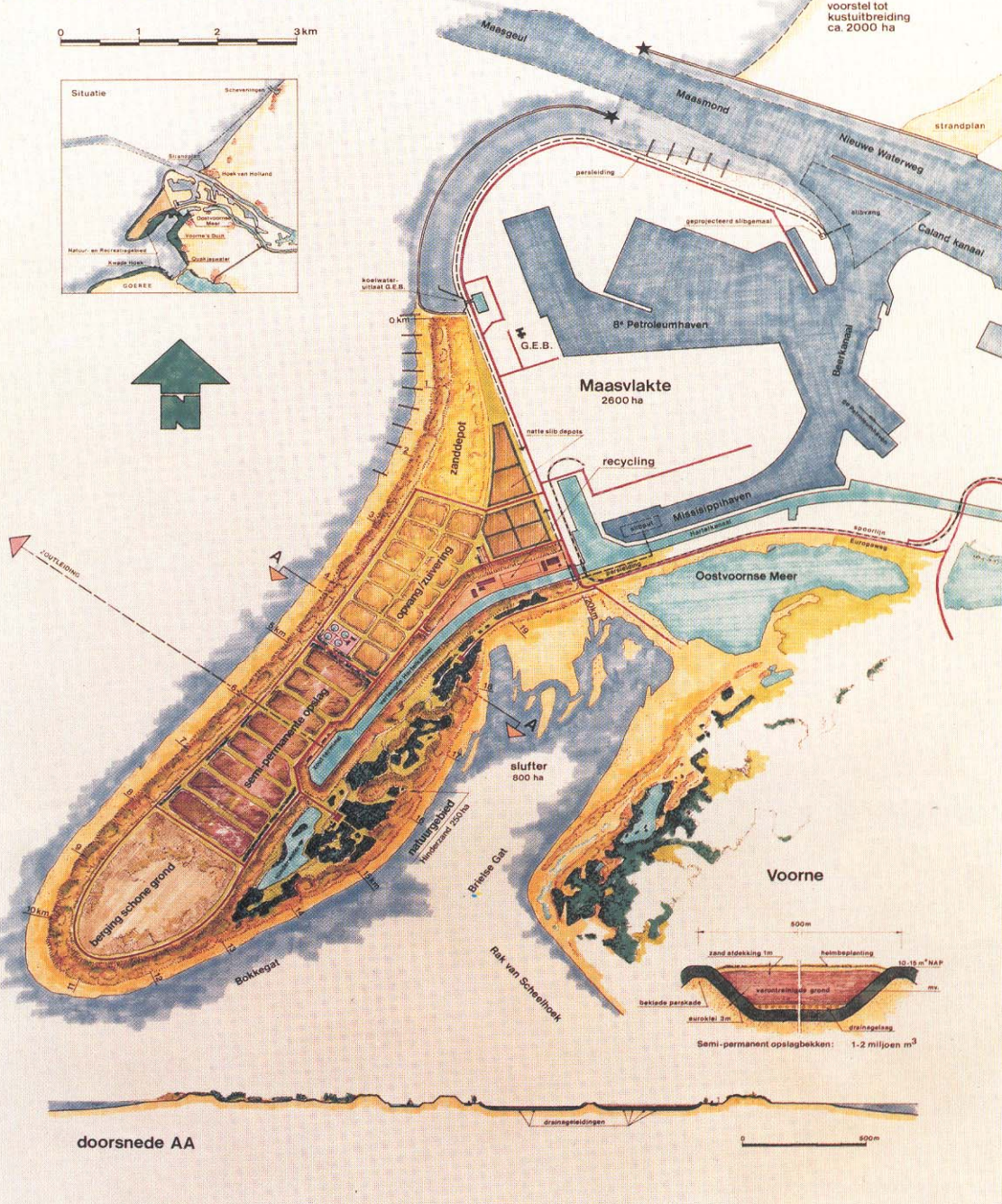


Satellite photo of
the coastal area
from Rotterdam
to the south

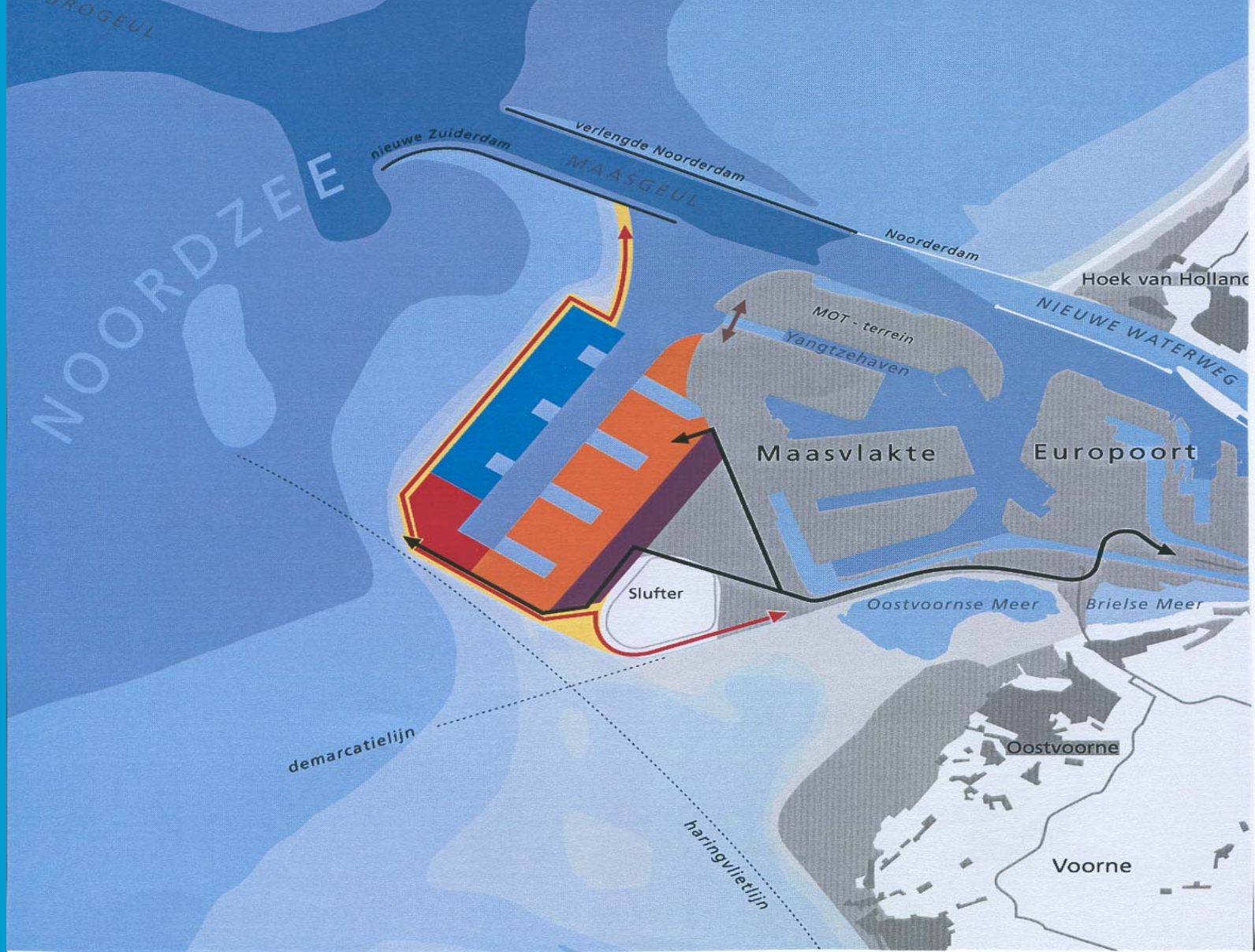


Morphological
situation in the
coastal zone of
the port of
Rotterdam

land van de hawk



Development plan for the port of Rotterdam using the forces of nature



RAMSAR CONVENTION

- Designate Ramsar sites
- Wetlands within land-use planning
- Establish nature reserves
- Consultation with parties



Habitat directive

89 areas, green

Birdsdirective

79 areas, brown

EU protected areas in the Netherlands.

Guiding principles

- Sustainable development
- Balance between ecology and economy
- Participation from the very beginning
- Prevention is better than cure
- Ecological values benefit socio-economic values
- Requirements of Conventions

OBJECTIVES

Adverse effects



Restoring measures



OBJECTIVES

Adverse effects after measures taken



Compensation



COMPENSATION



- 750 HA NATURE AND RECREATION AREA
- 1000 HA INDUSTRIAL AREA

OBJECTIVES

Disturbance in the **Current State** \Rightarrow Better Management

Disturb. **Future** \Rightarrow Protective Measures + Perm. Managt.

No Poss. Measures \Rightarrow Social Necessity + Min. Impact

Legislative requirements \Rightarrow Comply with the law

Adverse Impact \Rightarrow Restoring Measures

Adverse Impact **After Measures** \Rightarrow Compensation

MULTI CRITERA EVALUATION

COAST AND SEA	DESIGN A	DESIGN B
COASTLINE STORMSURGE SAFETY	- 0	0 -
ACCESSIBILITY NAUTICAL SAFETY	+ 0	0 +
CAPITAL DREDGING MAINTENANCE DREDGING	-- ++	- --

MULTI CRITERA EVALUATION

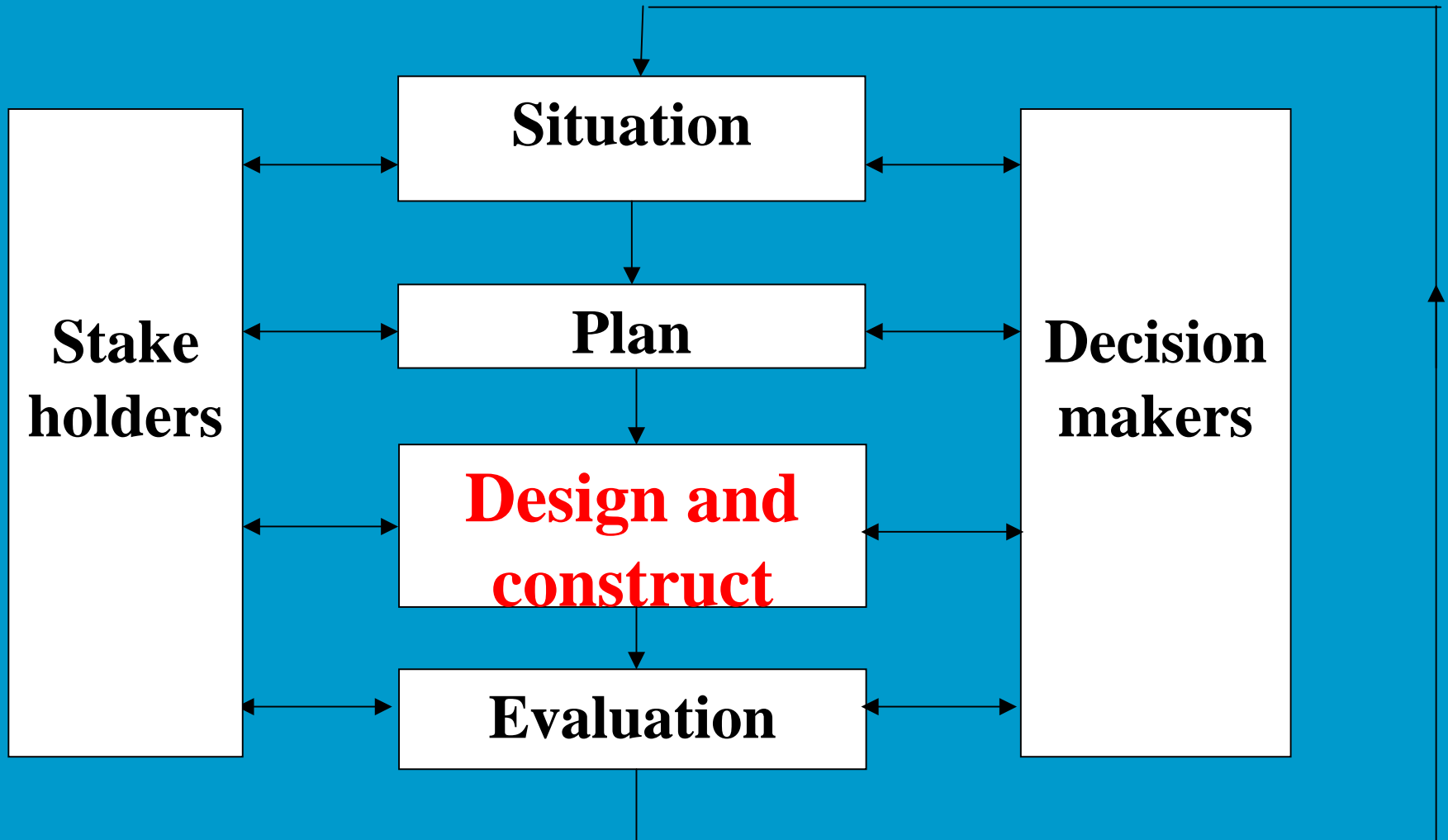
ASPECTS	DESIGN A	DESIGN B
COAST AND SEA NATURE	0 --	- --
RECREATION TRANSPORT	0 +	0 ++
ENVIRONMENTAL QUALITY LANDSCAPE	0 0	0 +

PLAN: DELIVERABLES

- Programme of requirements
- Series of prioritised goals
- Commitment of the parties
- Finances and resources

Guiding principles

- Sustainable development
- Balance between ecology and economy
- Participation from the very beginning
- Prevention is better than cure
- Ecological values benefit socio-economic values
- Requirements of Conventions
- Show and evaluate all impacts



Third step: Design and construct

DESIGN

- Methodology
- Lay-out and landscape design
- Design of wetland functions
- Management plan
- Appraisal and negotiation
- Tendering



Third step

DESIGN

- Methodology
- Lay-out and landscape design
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SITE CONSTRUCTION AND MANAGEMENT

- Site construction
- Organisation structure
- Adaptive management
- Completion
- Long-term stewardship
- Training
- Communication





Guiding principles

- Sustainable development
- Balance between ecology and economy
- Participation from the very beginning
- Prevention is better than cure
- Ecological values benefit socio-economic values
- Requirements of Conventions
- Show and evaluate all impacts
- Sound management

DESIGN: DELIVERABLES

Project plan

Detailed design

Management guideline

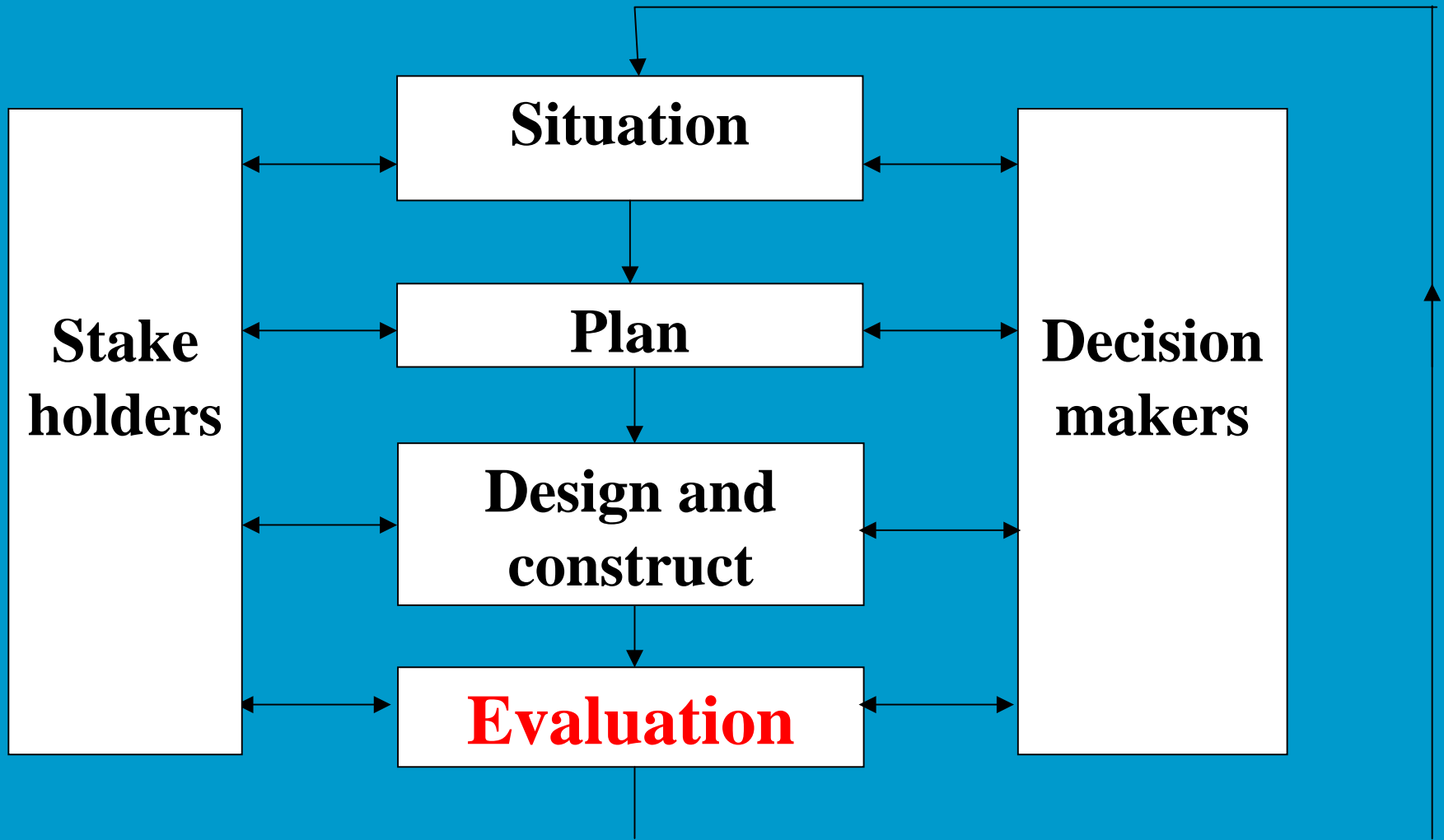
Tool for communication



SITE CONSTRUCTION AND MANAGEMENT DELIVERABLES

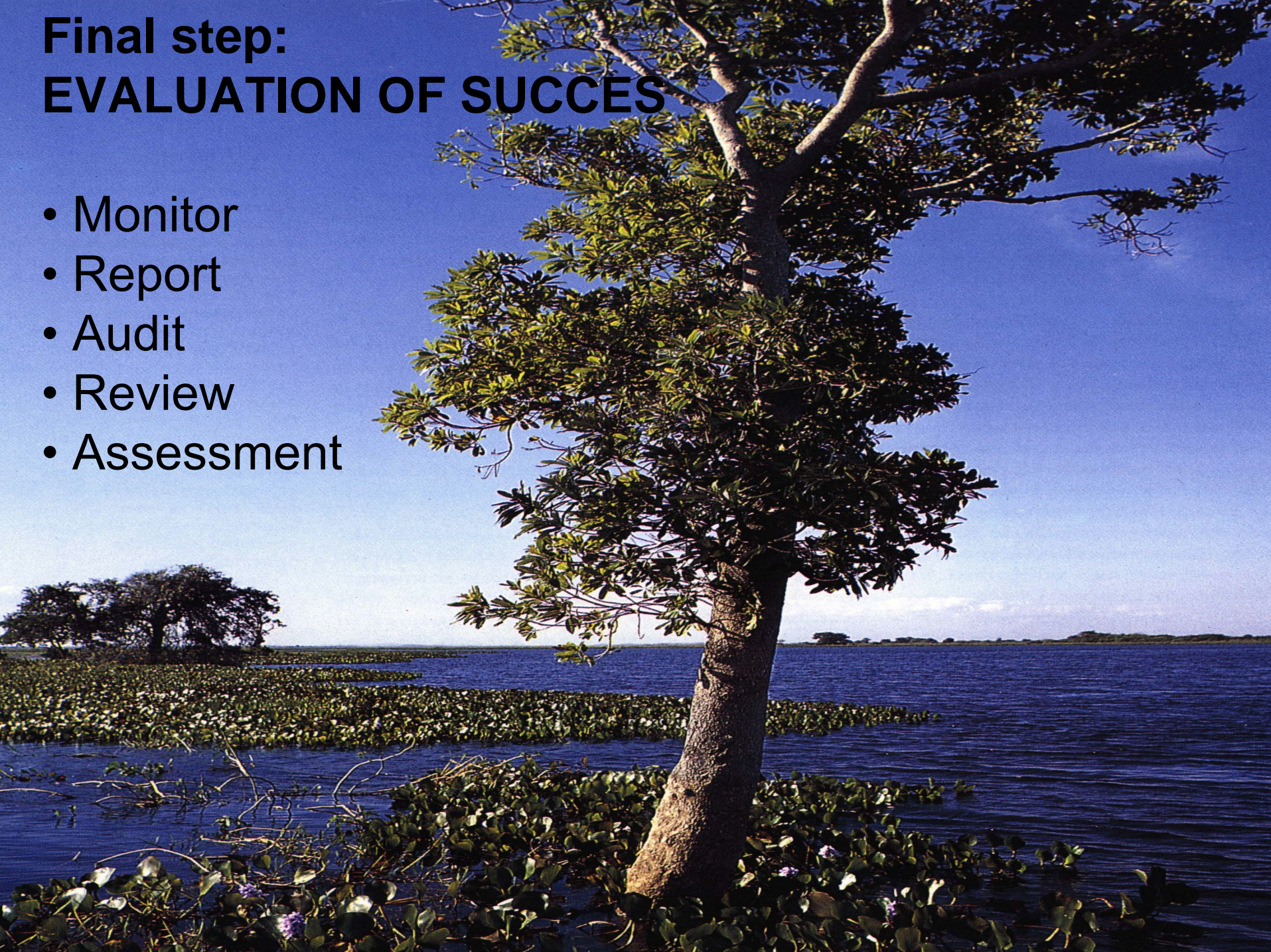
- Measures
- Implementation of wise use
- Management structure
- Contribution to the quality of life





Final step: EVALUATION OF SUCCESS

- Monitor
- Report
- Audit
- Review
- Assessment



EVALUATION: DELIVERABLES

- Public relations
- Policy tool
- Changes required
- Feedback
- Continual improvement

Conclusions / Guiding principles

- Sustainable development
- Balance between ecology and economy
- Participation from the very beginning
- Prevention is better than cure
- Ecological values benefit socio-economic values
- Requirements of Conventions
- Show and evaluate all impacts
- Sound management
- Strategy is a must

